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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,696	10/30/2001	Michael Eneboe	01-490	9160

24319 7590 10/22/2003

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EXAMINER

SIEK, VUTHE

ART UNIT PAPER NUMBER

2825

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/021,696	Applicant(s) ENEBOE ET AL.	
	Examiner Vuthe Siek	Art Unit 2825	
	-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --		

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 07 August 2003.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) 14 and 15 is/are allowed.

6) ☒ Claim(s) 1,2-6,8-13 and 16-23 is/are rejected.

7) ☒ Claim(s) 7 is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

1. This office action is in response to application 10/021,696 and amendment filed on 10/11/2003. Claims 1-23 remain pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2-6, 8-13, 16-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Miller et al. (6,539,531).

4. As to claims 1, 11 and 16, Miller et al. a method of designing integrated circuit (ICs) and their interconnect system including IC component cells and interconnect component cells in a cell library. Both IC and its interconnect system are designed by selecting and specifying interconnections between component cells including in a cell library. Interconnections between component cells are flexibly designed to act like filters tuned to optimize desired frequency response characteristics. The behavior models of the IC and its interconnection systems, based on the behavior models of the their selected component, are determined whether the IC and its interconnection system meet various performance criteria and constraints (for example bandwidth) (see Figs. 6, 11-23 and description, col. 5, line 66 to col. 7, line 3; col. 8-10; col. 13 line 20 to col. 14,

line 47). Thus, Miller et al. teach designing an IC including its interconnection system based at least on bandwidth and interconnect configuration.

5. As to claims 2-6, 8-10, 12-13 and 17-23, Miller et al. utilizing a synthesis to synthesize and an IC having the specified designed (Fig. 6); the optimized design including a specified characteristic for the interconnect (impedance), wherein the specified characteristic including a bandwidth (Figs. 11-13; col. 13); wherein a direct connectivity definition, derived from the optimized data is utilized to synthesize an IC (Figs. 6, 11-13); wherein optimizing including arranging components of the IC and specifying bandwidth between components (col. 13, Figs. 6, 11-13); wherein optimizing is performed without user intervention by an agent and IC is designed and fabricated depended on applications (col. 13, col. 15, lines 8-30; Figs. 6, 11-13). In addition, Miller et al. components include macro cells or modules (col. 8, firm and soft macros); interconnect component cells conveying I/O signals between driver IC and receiver IC (col. 8, lines 36-67; col. 9) and some of component cells are previously designed and stored as cell library. Miller et al. teach interconnect systems are flexibly designed to act like filters tuned to optimize desired frequency response characteristics; and the structural models of the interconnect systems developed during the design process guide subsequent fabrication of interconnect systems for both the IC's intended testing and operating environment (see summary). This would correspond that the data is programmed in to a self-programmable IC. Optimizing includes partitioning based on cost consideration is standard practice of an IC design, thus it is art inherent.

Allowable Subject Matter

6. Claims 14 -15 are allowed over the prior art of record.
7. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior does not suggest that the components are arranged based on all of the following latency, scalability, timing consideration, power considerations, data switching and bandwidth.

Remarks

8. Applicant(s) have amended the claims and argued that the cited reference does not teach data being optimized based on at least one of bandwidth, latency, scalability, and isochronous interconnect configuration as recited in claims 1, 11 and 16. Miller et al. teach the recited limitations as described in above rejection. Accordingly, the current claims are not patentable over Miller et al.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vuthe Siek whose telephone number is (703) 305-4958. The examiner can normally be reached on M-F (6:30-4:00) 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (703) 308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Vuthe Siek
Primary Examiner
October 19, 2003


VUTHE SIEK
PRIMARY EXAMINER